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Media Education and Literacy in Latin America

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Abstract: In this paper, we discuss discourses on media literacy and the state of the art in media education in Latin America paying special attention to the contextual factors that have helped to shape such discourses and educational practices. We found that the main factors that are needed for understanding the situation of media education are the countries' historical background, the social and political developments as well as the government agendas that are translated into formal educational policies and school systems. Understanding this general context is essential because it frames and conditions the effective (or ineffective) use and critical appropriation of digital media in education in the region and it strongly impacts the development of media and ICT educational-related policies in Latin America. We also reflect on the role of the formal educational systems as key players in media education in many of the countries in the region. We end with a discussion of the main challenges associated with ICT literacy in the region, namely that in a context where socio-economic differences are vast and where new media and information access is so unevenly distributed, media education should serve as a mechanism to achieve more equitable access and meaningful appropriation of the nowadays indispensable communication and information technologies.

Schlüsselbegriffe: Media education; media literacy; ICT; digital divide; socio-economic divide; formal educational system; Latin America.

Inhalt

1. Introduction

Dealing with media literacy in different countries and different cultures requires dealing with different cultures of media education. Even if we use the same terms – or better the same English terms for the translation of national concepts – there is no consensus in the definition of media literacy and media education or like Buckingham (2001, p. 5) states:

> "The growth of international dialogue in the field has undoubtedly been of great value; but it is not always clear that everybody is talking about the same thing."

The awareness of the existence of different perspectives and approaches to media education and media literacy shows that we need to see them as cultural phenomena that are the result of different basic conditions under which the field of media education has developed in the course of history. To understand such 'foreign cultures of media education,' there is a need for identifying the determining factors that are able to influence how a certain culture judges and deals with different media, as well as pedagogical and educational approaches with regards to media. In a comparative study on approaches to media education and media literacy in Europe and the USA (Wijnen, 2008), the development of the media system, social and political developments regarding the assessment of media, the educational system, cultural peculiarities like questions of moral and ethics or the image of the child, and theoretical approaches concerning media on an academic level, as well as in the field of arts turned out to be important influential factors (Süss, Lampert and Wijnen, 2010, pp. 175–177).

A similar situation is observed in Latin America. Because of significant differences between the single countries and their various impact on media education one cannot put together all countries and talk about the region as a

whole. In our enquiry on discourses on media literacy and the state of the art in media education in Latin American countries we found that the main factors that are needed for understanding the situation of media education are the countries' historical backgrounds, the social and political developments, as well as the government agendas that are translated into formal educational policies and school systems. Because of this, our overview of Latin America will focus on these aspects, although other factors, such as moral and ethical questions, or academic discourses would be relevant as well.

Regarding current media developments, the question of access to Information and Communication Technologies (ICT), as well as the promotion of digital literacy are closely related to other existing forms of social and digital divides that are characteristic of all Latin American countries. As a matter of fact, even though the region recognizes the importance of ICT in all aspects of society and, in particular, in education, Latin American countries, especially the lowest-income ones, are faced with concrete societal and technological challenges including a huge digital divide, high technical implementation costs and infrastructural and technical issues, such as the lack of access to technology or poor connectivity (UNESCO, 2011). But these are not the only obstacles Latin America is confronted with. Deeper and arguably more difficult to solve structural problems are rooted in Latin American societies as well. These include high poverty levels, enormous socio-economic inequalities among the rich and the poor, among rural and urban areas, as well as among the indigenous people and the non-indigenous ones. Furthermore, low literacy levels of big parts of the population also hinder the implementation of effective formal digital media education policies in the region. Indeed, some of the main educational challenges that the region currently faces in this respect are integrating digital media education into the existing media education programmes (Martínez de Toda, 2010) and in the countries which do have a media policy, finding the mechanisms and resources to effectively implement such policies (Hinostroza and Labbé, 2011).

In terms of formal education, the region is characterized by quite inflexible and low-quality educational systems, as international education assessments and standards demonstrate (e.g. OECD, 2010). Moreover, the same cultural and economic divides experienced by the general society are mirrored in most of the educational systems of the region, with the richer segments of society being the ones who tend to enjoy the higher quality of pre-school, primary and secondary education and consequently, higher entrance rates to tertiary education. Other drawbacks more specifically related to digital media education include the scarcity of relevant digital content, poor access to open education resources, as well as many teachers' limited resources and/or capacities to use technology effectively in the classroom (UNESCO, 2011). Undoubtedly, all of these challenges have an impact on the successful development of policies on digital media and ICT in education.

Understanding this general context is essential because it frames and conditions the effective (or ineffective) use and critical appropriation of digital media in education in the region and it strongly impacts the development of media and ICT educational-related policies in Latin America.

Taking into account the specific characteristics of Latin America and the way these features impact media literacy in general and digital literacy in particular, we will discuss the historical, socio-economic, political and technological contexts that have impacted and framed media education in the region with a special focus on existing ICT policies in education. We will also reflect on the role of the formal educational systems as key players in media education in many of the countries in the region. We will end with a discussion of the main challenges associated with ICT literacy in Latin America, namely that in a context where socio-economic differences are vast and where new media and information access is so unevenly distributed, media education should serve as a mechanism to achieve more equitable access and meaningful appropriation of a nowadays indispensable communication and information technologies.

2. Educational Contexts

With a population of 582.6 million inhabitants and a literacy rate of 90% for females and 92% for males, Latin America is a very heterogeneous region historically characterised by high levels of poverty, social inequality, as well as high degrees of political instability (until the early 1980s) (World Bank, 2012). Nowadays, the region features strengthening democracies and relatively steady economic growth (SITEAL, 2006). Poverty levels, however, have not improved considerably in the last decade and, strikingly, social inequality has even increased (Lugo and Schurmann, 2012, p. 8). Like most deficits in Latin American society, educational problems more substantially affect the most socio-economically deprived sectors, namely, women, lower-income groups, rural populations and indigenous people (Lugo and Schurmann, 2012, p. 11).

2.1 Access to Education, Graduation Rates and Literacy

Both primary and secondary schooling has expanded considerably since the 1950s as a result of major development efforts in the region (SITEAL, 2006). As a matter of fact, the average enrolment percentage in the region is currently 95% in primary school and 90% in secondary education; in 2011, many countries achieved universal primary education (UNESCO, 2011). Nevertheless, access to pre-primary and higher education is still quite limited in many parts of the region. Indeed, even though in the last 30 years, access to higher

education quadruplicated[1], the average enrolment rate is still much lower in Latin America than in more developed countries (32% vs. 88% respectively) (UNESCO/IESALC, 2009; Lugo and Schurmann, 2012, p.14). In particular, access to education for children younger than three years is extremely low, an issue which may reflect, among other things, the reduced educational offer for this age group (OEI/ECLAC/SEGIB, 2010).

Evidence indicates that pre-school experience enhances the general development of children. In particular, disadvantaged children benefit significantly from good-quality pre-school experiences, especially in contact with children from different social backgrounds (Sylva et al., 2010; Sylva et al. 2005). In recent years, early and pre-primary education has become a key priority for education policy-makers in Latin America and it is indeed one of the most important educational goals of the region for the year 2021. This is particularly important in countries such as Guatemala, Honduras, Paraguay and the Dominican Republic where no more than a third of pre-school children have access to education. Not surprisingly, access to pre-school educational and child-care services in Latin America are more common in higher-income socio-economic groups (Lugo and Schurmann, 2012). Pre-school education in the region is not only relevant from an educational perspective, but also from a socio-economic one because in the most marginalized sectors of society, access to education can also guarantee access to complementary nourishment, especially important among the most socio-economically challenged sectors of society (OEI/ECLAC/SEGIB, 2010).

Apart from the limited access to pre-primary and higher education, high drop-out rates in primary and secondary education are also observed, especially among lower-income groups such as indigenous and Afro-American populations or rural groups (ECLAC, 2010). Indeed, only 2% of children from higher-income groups have not completed primary education as opposed to 12% of children from lower-income groups (ECLAC, 2010). Furthermore, even though 96% of children graduate from primary school in urban areas, only 85% do so in rural ones. At the level of secondary education, the situation is even worse: While 80% of young people living in high-income households complete secondary school, only 20% from low-income households do.

Even though graduation rates from primary and secondary school vary widely, Latin American countries can be grouped into five broad categories (SITEAL, 2010; Lugo and Schurmann, 2012; see Table 1).

1 In 2005, 16 million students were enrolled in higher education in Latin America (UNESCO/IESALC, 2009).

Table1: Latin American countries grouped according to graduation rates in primary and secondary school. (Based on Siteal, 2010; Lugo and Schurmann, 2012)

Group	Countries	Group description
1) High graduation rates at both the primary and secondary levels	*Argentina, Chile, Cuba, Peru*	– Most of the population between 5–17 years of age has access to primary and secondary education and succeed most in completing both primary and secondary school. – Drop-out rates are linked to socio-economic status and geographic location, increasing considerably for students in lower socio-economic groups and in rural areas.
2) High graduation rates at the primary level and medium graduation rates at the secondary level	*Bolivia, Brazil, Colombia, Costa Rica, Ecuador, Mexico and Panama*	– Uneven distribution of educational problems. For every adolescent with high socio-economic status who drops out of secondary school, there are four students from low-socio-economic groups who do the same. – For each adolescent in urban areas no longer attending school at age 17, there are two in rural areas who find themselves in the same situation.
3) High graduation rates at the primary level and low graduation rates at the secondary level	*Paraguay and Uruguay*	– Students tend to be low-performing, have difficulties progressing from primary to secondary school, and struggle to retain information learned in secondary school. – Pronounced achievement gaps between students from different socio-economic groups.
4) Medium graduation rates at both the primary and secondary levels	*Dominican Republic and El Salvador*	– Widespread access to primary education. However, a significantly high proportion of students repeats grades and remains in primary school beyond the normal age of graduation. In some cases, primary schooling extends up to the age of 17. – Striking disparities in academic performance among different socio-economic groups and geographic areas – Underperformance crosses all levels of society, but it is much more evident in the lower socio-economic groups.
5) Medium graduation rates at the primary level and low graduation rates at the secondary level	*Honduras, Guatemala, Nicaragua*	– Compared to other countries in the region, this group provides significantly less access to education with a high percentage of children and adolescents who never attend school. – Most children attend school at age 9, which implies a late access to schooling. – Inequality based on socio-economic status and geographic location is so extreme that many children from low socio-economic groups and rural populations have no access to education, while in the highest socio-economic groups, some adolescents' educational achievement is equivalent to that of students in the more developed countries of the region.

As many other social problems in Latin America, drop-out rates and grade repetitions are closely related to socio-economic status, geographic location and gender. This means that the groups most likely to discontinue their education are poor people, people living in rural areas, and women (SITEAL, 2010, p.12). In particular, indigenous people represent one of the poorest and most marginalized social groups in the region. They have historically been confronted with annihilation, exploitation, neglect and discrimination, which have dramatically hindered their social, political, economic and cultural participation and integration. Indigenous people hold the most precarious jobs, and, apart from a few exceptions, they are practically absent from the government and business decision-making levels (Lugo and Schurmann, 2012). Unsurprisingly, their access to quality education is still extremely limited. In part, this is due to the fact that the few attempts that have been made to develop multicultural education policies and programmes have usually failed as a result of insufficient financial support, poor teacher training, a shortage of bilingual teachers, and lack of resources. In the few cases where multicultural or intercultural bilingual education exists, it is not widespread (Lugo and Schurmann, 2012).

Latin America is marked by important educational deficits. One of the most urgent ones is eradicating both illiteracy[2] and functional illiteracy[3]– the inability to use basic reading, writing and numeracy skills efficiently in everyday life (OEI/ECLAC/SEGIB, 2010, p.51; Lugo and Schurmann, 2012). As regards literacy levels, Latin America's average illiteracy rate ascends to 9% of the population aged 15 and over, while in several countries – including Ecuador, El Salvador, Guatemala, Honduras and Nicaragua – it exceeds 15%. Contrarily, in countries such as Argentina, Chile, Costa Rica, Cuba, Venezuela and Uruguay, the illiteracy average is less than 5%. In terms of gender differences, a common trend is observed throughout the region, namely that women are more often illiterate than men. In addition, functional illiteracy affects almost 29% of people aged 15 and older. Here, big differences are observed between different socio-economic groups, ranging from almost 47% in the lowest-income quintile to around 13% in the most affluent one (OEI/ECLAC/SEGIB, 2010).

2.2 The Quality of Education

Lugo and Schurmann (2012, p.14) notice that – according to the Second Regional Comparative and Explanatory Study of the UNESCO (2005) – high percentages of young Latin Americans lack basic skills in language,

2 A person is considered as illiterate if he/she is not able to read, write or understand a short text about their everyday life.

3 The "Educational goals for 2021" document defines functional illiteracy as "the incapacity to employ reading, writing and logical-mathematical skills in an efficient way in everyday situations".

mathematics and science in comparison to people of the same age in more developed countries. Furthermore, Lugo and Schurmann demonstrate that according to the 2009 PISA results (OECD, 2010) none of the Latin American countries reached the performance levels that are determined by the OECD. There are of course various factors that influence such depressing results, but one of the important factors for improving the achievement of young people is the quality of teaching and the training of teachers.

Teacher education is another pressing issue in Latin American countries. Latin American teachers have less formal education and receive also less classroom practice before teaching than their colleagues in other countries. Once they start working, there is almost no teacher evaluation (Lugo and Schurmann, 2012, p.15). Furthermore, teachers are not well paid, the teaching profession is not very prestigious and better paid teaching jobs or jobs with a better reputation are more related to seniority than to performance without real incentives for teachers to improve their quality. Teachers are also affected by poverty and more and more come from the lowest income quintile (ibid.). Still, many teachers have a positive attitude towards media education and find it important to advance their students' media literacy with regard to a critical media usage and preparing young people to become critical citizens of the so-called information society. Nevertheless, they lack adequate training and resources for a better integration of media education in the classroom (De Fontcuberta, 2009).

3. Telecommunication Infrastructure and Access to ICT

In order to effectively integrate new media and ICT in Latin America's educational systems, several pre-requisites must be met, namely counting with a supportive environment, access to equipment, networks and quality resources. In this sense, one of the biggest problems Latin America is confronted with is that the distribution of technology and technological infrastructure in the region mirrors the existing socio-economic inequalities. This means that even though important progress has been made in the last few years to expand access to technology, the digital gap between the upper and the lower socio-economic groups is still striking. Particularly, internet access and network coverage is very unevenly distributed with a marked shortage observed not only in rural areas, where infrastructure expansion is not a profitable venture, but also outside capital cities and metropolitan areas (Jordan, 2011). As Lugo and Schurmann (2012, p.7) point out "in many cases, the digital revolution is occurring in large cities only."

The digital gap exists not only in a within-country level, but also among the different countries in the region. As a matter of fact, big access gaps are observed among (some of) the higher-income countries, such as Argentina,

Chile, Puerto Rico, Panama, Trinidad and Tobago, and Uruguay, which have more advanced telecommunications infrastructures as opposed to lower-income countries-including Belize, Bolivia, Ecuador, Guatemala, Honduras, Nicaragua, Paraguay, Peru and the Dominican Republic whose infrastructural development is at an initial stage (Katz, 2011).

According to the latest report on global ICT readiness, "Latin America and the Caribbean continue to suffer from an important lag in adopting ICT and technology more broadly" (Dutta and Bilbao-Osorio, 2012, p. XIII). Indeed, only a few small economies, namely Barbados, Puerto Rico, Chile, and Uruguay, manage to be included among the top 50 in the ICT readiness ranking. As main reasons for Latin America's failing Dutta and Bilbao-Osorio (2012) point out the following: (1) insufficient investment in the development of ICT infrastructure; (2) a weak skill base in the population as a result of poor educational systems; (3) unfavourable business conditions that fail to encourage entrepreneurship and innovation. In order to improve the region's competitiveness and make a shift towards more knowledge-based economies, these deficiencies need to be addressed.

The current ICT framework in Latin America seems to advocate consistent ICT policies which can take advantage of the broader ICT infrastructure development. This may be possible via the establishment of innovative alliances between the public sector (e.g. education) and the private ICT sector (Lugo and Schurmann, 2012, p. 7). It is important to stress, though, that having the appropriate technological infrastructure in place is no guarantee of effective ICT-related educational practices. In particular, a major challenge is tackling the tremendous inequalities when it comes to access to and the quality of education so that all students can enjoy a high quality education, independent of their socio-economic background. A second challenge is the continuous development of teachers' professional capacities so that they can be able to employ (and teach) new media and ICT effectively in the classroom (Unesco, 2011, p. 7).

4. Approaches to Media and ICT Education in Latin America

4.1 A Brief Historical Overview

Throughout history, different approaches to media education have co-existed in Latin America. For example, one approach was to see media education as a kind of ideological resistance to the political and economic dominance of the USA (Fuenzalida, 1992, p. 136). US-American media, to which Latin Americans were also exposed to, were accused of manipulating people and educating them according to capitalistic and neo-liberal values. Media education was seen as a way of opposing this cultural colonisation by

promoting a critical reading and reflection of all kinds of media (ibid., pp. 136–137). Another way of functionalising media education as a means of resistance was to use it as secret opposition against the manipulation of the authoritarian regimes of the own countries. The goal was to teach people to become critical citizens being able to strive for a democratic society by reflecting media messages, producing their own media content and searching for alternative ways of communication apart from mass media (ibid., pp. 137–138). Because historically the Catholic Church has had a great significance in Latin America, Catholic institutions have always been of importance in different fields of education, including media education. Indeed, media education in Catholic contexts was often seen as an instrument of defending ethic, moral and religious values, such as protecting young people from sex, violence and other media content that might be against the values of a Catholic education (ibid., pp. 138–139).

The 1970s arguably represent one of the most crucial stages in terms of communication development in the region. Previous vertical and unidirectional models began to be criticized giving rise to a new communication paradigm based on pillars such as "the right to information", the "horizontal and participative communication" and the "balanced flow of news" (Oliveira, 1994, p. 273, as cited in Aguaded, 1995, p. 25). In this context, it was not unusual that working class people began to assume an active role, for instance, by opening new communication channels for these social groups (e.g. community media stations). In parallel, US models of communication analysis began to lose strength while new research areas began to emerge marked by a focus on the analysis of ideological systems, cultural dependence and the reception conditions of media messages (Aguaded, 1995). In other words, there was a growing interest in understanding the mechanisms of domination employed by alien cultures (Oliveira 1994, 276). In this new context, and supported by the UNESCO, the first educational projects on the critical reception of mass media emerged. Many of these projects were supported by Christian movements and Catholic educators who considered media education as one of their pastoral goals. Also influential in this period were more critical lines of thought such as the "critica ideológico-denuncistas", and later on the Liberation Theology.

The 1980s, on their turn, were characterized by the crisis of previous communication models including the American functionalism, Althusser's paradigm of the Ideological State Apparatuses, and the moralism of the Christian churches (Oliveira 1994, pp. 278–289). This period was marked by (1) the rebirth of a movement that favoured the Education for Communication (comunicación para la educación), led by the so-called Seminarios Latinoamericanos (Latin American seminars), as well as by (2) the search for support in the fight for democratic communication policies with a populist and progressive character. Such initiatives were highly-tuned to Paolo Freire's conscientization theory and the radical commitment to 'educate to trans-

form'. A great challenge during the period was translating the existing critical analysis and research into concrete educational experiences – in other words, finding the ways to transform these critical findings into "instrumentos populares liberadores" ('liberating working class instruments') (Kaplún, 1992, p.196). According to Aguaded (1995), one of the most interesting experiences in the region during that period were the "Seminarios Latinoamericanos". As Aguaded describes, these seminars aimed at discussing existing research in the area and contrast their findings with everyday practices. These seminars brought together different local initiatives and programmes that were in place at the time in the region. The first seminar took place in 1985 in Santiago, Chile and it brought to light the existence of several informal educational experiences in the region. On the contrary, the development of media education in the formal educational systems was still incipient. This first seminar raised important questions like 'what is the ideal curriculum to promote communication for education?' (educación para la comunicación); 'how to employ television in a positive way at home, at school and in social life?' and 'how to participate in the creation and the development of national communication policies?'.

A second seminar was held in Curitiba, Brazil. It focused on discussions on the transcendental role of mass media in society as ideological reproduction apparatuses and the subsequent importance of media education to support the development of critical consciousness, active attitudes and the liberation of people's creativity. The community's commitment was important in order to achieve a true change in the communicative process, for instance by means of a new alternative: working-class communication channels. During these seminars traditional educational models were questioned while more horizontal communication models and the role of teachers as facilitators were advocated. In a time where the media education programmes in place were characterised by great fragility and instability, the objectives set during this seminar constituted a great challenge (Aguaded, 1995).

The third seminar held in Buenos Aires, Argentina in 1988 concluded that the main difficulties for media education in the region were (1) to implement Media Education programmes into the formal educational curriculum and (2) to evaluate such initiatives. Nevertheless, active and participative methodologies began to be studied in more detail and the results of existing studies started to be systematically integrated into practical experiences. In particular, the implementation of research and actions which focused on the subject-media relationship were emphasised (Aguaded, 1995).

The 1990s were characterized by the existence of a variety of media education programs all over the continent, most of them already enjoying more stability and a solid experiential base (Aguaded, 1995, p. 26). Oliveira (1984, p. 282) classified the Media Education programs of this period as belonging to one of three general streams:

- The *functional-moralist approach which is* characterized by attempts to control the reception of media messages with a specific ethical vision of mass media and society.
- The *functional-structural-culturalist approach which* focusses on the role of formal education to decode media images and messages.
- The *dialectic-inductive-popular approach which* is highly committed to the most impoverished and socially excluded sectors of the Latin American society.

The beginning of the 20th century was marked by the UNESCO conferences in Vienna (UNESCO, 1999)[4] and in Seville (UNESCO, 2002)[5] which highlighted the fact that media education was "about teaching and learning *with* and *about* media, rather than through media." Indeed, the Seville conference concluded that it was necessary to develop both a formal and informal curriculum for media education which integrated critical analysis and creative production by promoting the sense of community and social responsibility, as well as individual self-fulfilment (Youth Media Education, Seville, 15–16 February 2002).

In the early 2000s, several media education initiatives in the region were consolidated and new ones, especially in formal education contexts, began to emerge. Arguably, one of the most important initiatives in this period was the development of a framework of reference for the creation of an exclusively Ibero-American curriculum based on the collaboration of different Latin American countries, as well as Spain and Portugal. As of 2005, this framework was constituted on the basis of national reports on the current state of media education, as well as a database of existing media education activities in the region. This was complemented by the consultation of specialists in media education in Ibero-America (Castillo and Gastaldi, 2005; Gálvez, 2005). Probably one of the most important conclusions from that work was that because the educational systems in the region were quite inflexible and slow in terms of catching up with new technological and social trends, the content related to media education in the formal curriculum was usually weak. Indeed, none of the countries included in this framework[6] had a vertical subject specifically devoted to media education with media being the object of study. Nevertheless, by 2005, several countries in the region had declared their intention or were already following the trend to develop transversal or horizontal objectives that allowed the incorporation of media education into the formal education curriculum (Castillo and Gastaldi, 2005).

4 Educating for the Media and the Digital Age, UNESCO conference, Vienna, 18-20 April 1999
5 Youth Media Education UNESCO conference, Seville, 15-16 February 2002
6 In 2005, the report included 11 countries, namely, Argentina, Bolivia, Brazil, Chile, Colombia, El Salvador, Mexico, Peru, Portugal, Spain and Venezuela. Later on, Ecuador and Uruguay were added.

4.2 ICT Policies in Education and Their Implementation in Latin America

Since the advent of the Internet, media education has acquired an unprecedented societal importance. Indeed, historically, in many Latin American countries a wide range of actors have played a role in the development of media education policies including government, the church, community actors, non-governmental organisations, universities, (National) Television Councils as well as the media themselves (e.g. local or national Newspapers Associations) (see Aguaded, 1995; Castillo and Gastaldi, 2005; Pérez 2005). However, since the late 1990s, the formal school system in many countries in the region has assumed a crucial role in media education. This is particularly the case in countries such as Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, México, Peru, Portugal, El Salvador, Uruguay and Venezuela, which in 2005 declared their intention to develop media education-specific objectives for their formal educational systems (Castillo and Gastaldi, 2005). In many cases, especially in those countries with more advanced educational policies in general, it is the Ministry of Education that establishes the main guidelines for what is to be taught at school. Depending on the level of curricular (de-)centralisation, the ability of schools to plan and apply their own curricula may vary from country to country.

Nowadays, many countries in Latin America comply with formal policies and/or initiatives for the integration of ICT into their educational systems. Most of these initiatives began in the 1990s with the launching of four milestone programmes: Red Enlaces (Links Network) in Chile; Proinfo in Brazil; the Red Escolar (School Network) in Mexico, and the Programa de Información Educativa (Computer Education Programme) in Costa Rica (Lugo and Schurmann, 2012). One of the features that distinguished these programmes from previous ICT initiatives in the region was that they provided both connectivity and the equipment which opened up new possibilities for the use of technology in education. Later on, similar initiatives were developed in Argentina (Educ.ar and Conectar Igualdad), Colombia (Colombia Aprende) (Colombia learns), Peru (Huascarán) and Uruguay (Plan Ceibal).

Apart from the aforementioned initiatives, there is, however, little information regarding the formal ICT policies in education available in Latin America and their degree of implementation. This is mainly due to the lack of consistent indicators that account for the advances and challenges of the educational systems (Hinostroza and Labbé, 2011, p.12). Yet, Hinostroza's and Labbé (2011) carried out a comparative study on the ICT policies in education in the region. Their study takes into account the formalization level of the ICT policy, its characteristics, integration into the curriculum and expenditure. In particular, they focused on variables, such as the level of ICT implementation at schools (infrastructure, ICT competences, ICT use, and management), the school context (educational level, geographic location and

administration) and the educational impact of the policy (school drop outs, educational lag, etc.). Their study included 19 Latin American countries, although only 17[7] responded to the survey. Their study revealed that:

- 76% of the Latin American countries included in the study (14 countries) are either designing or have already designed a formal ICT policy in education. Out of these, only 53% (9 countries) have officially published an ICT policy in education.
- 7 of the 9 countries which have a written and published ICT policy work with an educational informatics unit. This is also the case of most countries currently designing their ICT policy.
- In a few countries, like Chile and Ecuador, the ICT policy is implemented by different units of the Ministry of Education including curriculum, teachers' assessment and evaluation units.
- The macro context in which ICT policies in education takes place have an important impact on the level of ICT access and use at schools. This is why the existing socio-economic gaps within and among the countries are somehow reproduced in the ways ICT policies have been implemented in the educational system.

When it comes to the index of institutionalization of the ICT policies in education, Hinostroza and Labbé (2011) argue that Chile is the country with the highest score followed by Nicaragua and Mexico. On the contrary, the countries with a lowest index are Honduras, Argentina and Ecuador. The countries with a higher level of institutionalization are countries where the government structure is highly centralized and where the Ministry of Education takes a leading role in designing and implementing policies. As far as the characteristics of the ICT policies in education are concerned, most countries have set up the following goals: innovation and/or changes in the teaching-learning practices (81%), improving school management (76%) and pupils' and teachers' development of ICT competencies (76% and 71%, respectively). Only half of the countries have explicitly stated more general goals such as (generally) improving pupils' learning (53%) or improving the national school coverage (47%), two of the most urgent problems in the region (CEPAL, 2009).

In terms of the number of actions considered in the policies that would allow taking better advantage of the diverse potentials of ICT, Ecuador and Mexico are the countries that have implemented a greater number of actions as opposed to Bolivia, Costa Rica and Guatemala which have implemented less (Hinostroza and Labbé, 2011).

7 The 17 countries included in this study were: Argentina, Bolivia, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panamá, Paraguay, Peru and Uruguay.

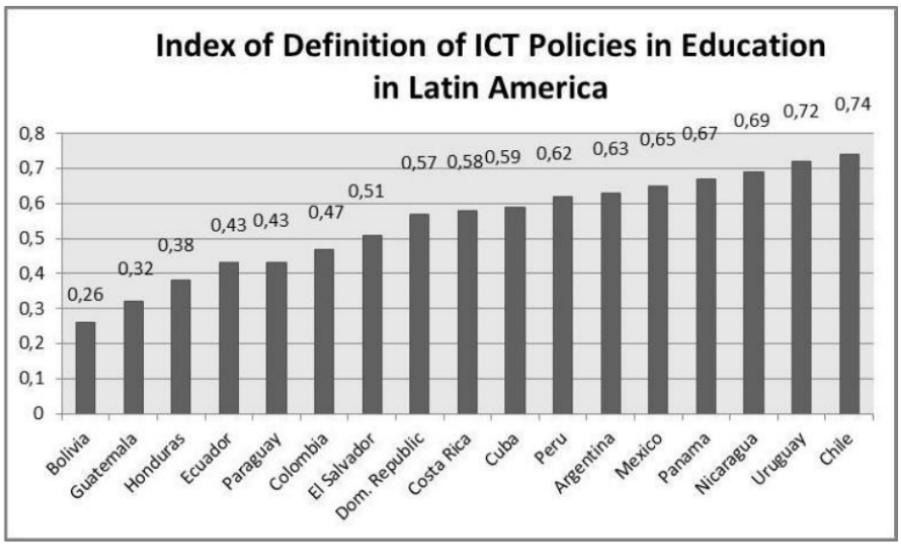
As concerns their integration into the school curriculum, Hinostroza and Labbé argue that here is no consensus regarding how ICT should be incorporated or which skills should be developed. Many countries, however, have developed a strategy which aims at employing ICT as a means to support the achievements of the objectives in other school subjects, for example science, rather than as an independent object of study. This instrumental use of ICT as complementary content is present at both primary (53%) and secondary school (67%) level. ICT as an independent subject is taught less frequently in both primary (14%) and secondary school (57%).

With regard to the ICT skills considered in the school curriculum of Latin American countries, there is a marked difference between primary and secondary education. The former focuses largely on the learning potential of ICT (56%). This means that ICT is mainly viewed as a tool to develop thinking skills, such as the development of search strategies on the internet, analysis, processing and synthesis of information, participation in virtual communities, etc. Functional competencies (33%) – i.e. those skills which are necessary to be able to adequately use PC applications – and ICT skills for the information society (27%) – i.e. the necessary characteristics to be able to successfully take part in the information society (e.g. communication skills, critical thinking, problem-solving skills, etc.) – are also present, although they are not greatly emphasized in the early school years. As opposed to the types of skills developed during primary school, in secondary school, the three types of skills are practically equally present, although functional skills are slightly more emphasized (67%) as compared to learning skills (63%) or skills for the information society (60%). Interestingly, ICT skills for the information society are given considerable less importance (27%) in primary school (Hinostroza and Labbé, 2011). Nevertheless, it may be important to start concentrating on these younger age groups as research worldwide shows that ever younger children access and use online technologies such as the internet (Livingstone et al., 2011).

As regards country differences, most countries have incorporated ICT objectives and defined ICT skills in their school curricula, however, 19% of the countries (Ecuador, Honduras and Paraguay) have not done it, yet. Thus, in sum, almost half of the countries have published a formal educational ICT policy. Most of these policies focus on the teaching-learning process, educational management and developing the ICT competencies of teachers and pupils. Furthermore, consistency is observed in the goals defined by each country policy and the actions implemented by them to reach such goals. Nevertheless, very few countries have incorporated systems to evaluate the implementation of their policies. Furthermore, almost half of the countries in the region do not explicitly consider top educational priorities in the region, such as improving the quality of the pupils' learning (in general), while 20% of the countries do not consider the development of ICT competencies in their curricula (Hinostroza and Labbé, 2011).

The figure below reflects the level of completeness of the ICT policies in education by country: The higher the score, the higher the level of development of their ICT policy. A high score means that the country has institutionalized its policy, has involved different national stakeholders in the achievement of the policy objectives, has included various actions in its policy and has incorporated in its curriculum several objectives related to ICT, as well as the development of ICT skills and competencies.

Figure 1: Index of definition of ICT policies (Source: Hinostroza and Labbé, 2011)



As figure 1 shows, Latin American countries have advanced in terms of the development of their ICT policies in education (average 0.58 on a scale from 0–1). It also shows that some countries, such as Chile, Uruguay and Nicaragua have defined and incorporated a higher number of dimensions into their policy. On the contrary, countries such as Honduras, Guatemala and Bolivia lag behind in terms of their ICT policy development. A sightly different situation is observed, though, when it comes to the actual implementation of the ICT policies in education as this varies enormously among the countries. Even though most countries have made progress in terms of PC equipment, there are still problems when it comes to ICT infrastructure, for instance: still only 57% of the schools have between 1 and 4 computers, while not even a third of the schools (31%) have 5 or more computers. Furthermore, only 36% of schools have internet access and 42% have access to digital resources made available by the respective Ministries of Education. With regard to the amount of computers per student, Uruguay is the country which possesses the best infrastructure (1 PC per 4 students) followed by Peru (1 PC per 13 students) and Chile (1 PC per 14 students). At the other

extreme we find Mexico (1 PC per 46 students), Nicaragua (1 PC per 121 students) and the Dominican Republic (1 PC per 130 students). In terms of internet access, the countries where most schools have Internet access are Uruguay (78%), Mexico (67%) and the Dominican Republic (60%). On the contrary, the countries with the lowest Internet access rates are Paraguay (10%), Cuba (5%) and Nicaragua (3%). Interestingly, two of the countries with the highest Internet access rates at school, namely Mexico and the Dominican Republic, are also two of the countries with the lowest PC access in the region.

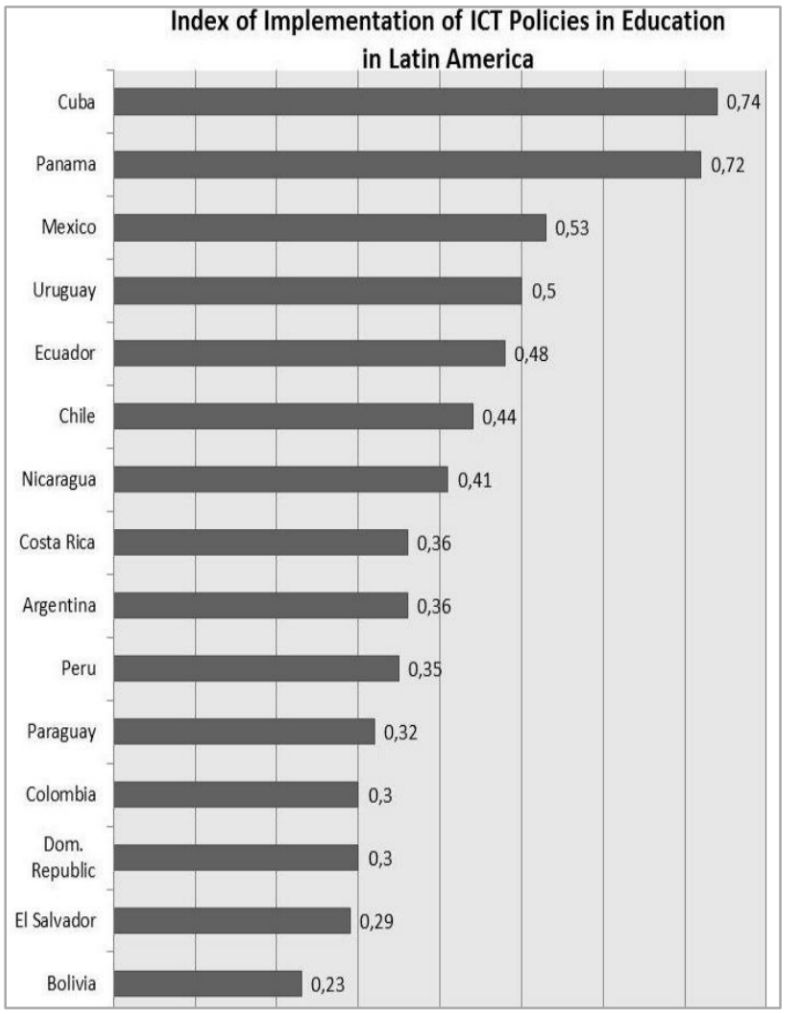
In this respect, Lugo and Schurmann (2012) identified three ways in which ICTs – or more specificly laptops and computers – have been integrated into the educational system in Latin American countries for the last two decades. The most simple and also cheapest one is the so-called laboratory model, where a single room at school is equipped with computers. This room can then be booked by teachers if they want to use them with their students. Another model is to equip individual classrooms with computers in order to make them better available as a pedagogical resource. But as in most cases there are only one or two computers available in each class and individual access for students is still limited. In recent years, national ICT policy actions have tried to promote the so-called 1:1 programme which means that every teacher and every student has access to a computer. However, in terms of the actual use of ICT infrastructure, Hinostroza and Labbé (2011) found that on average, schools employ computer labs at only 50% of their capacity, i.e. 23 hours a week[8]. Furthermore, they also argue that less than half of the Latin American countries (42%) work with a technical support at school. This finding is important because even though the ICT infrastructure at schools may be rather low, it is important that educational institutions work with some form of technical support as this is necessary to keep up and continue improving their existing ICT investment. Arguably, more worrying than the lack of technical infrastructure and support is the fact that only 38% of teachers and 36% of pupils have been trained in the use of ICT. This represents a considerable gap between the goals for the implementation of infrastructure as compared to the goals for the development of ICT skills. Undoubtedly, implementing effective ICT skills is more challenging than simply acquiring infrastructure.

Interestingly, but also worryingly, when these variables are analysed within the context of their usage, important gaps are observed between private and public schools, urban and rural areas and between secondary and primary schools. The disadvantages of public, primary and/or rural schools reflect and reproduce the existing socio-economic gaps in society (Sunkel and Trucco, 2010). These findings clearly indicate that future ICT policies in

8 On average, in Latin America schools teach classes for 44 hours a week.

education should focus on strategies that support equality so that the more vulnerable groups can also have access to quality education, ICT access and use.

Figure 2: Index of implementation of ICT policies (Source: Hinostroza and Labbé, 2011)



From a general perspective, the countries that show the highest index of implementation of ICT policies in education in the region are Cuba, Panama and Mexico, while the lowest level of implementation is observed in Bolivia, El Salvador and Dominican Republic (see fig. 2).

In sum, this study is useful in proposing relevant indicators to measure and compare the level of digital development in educational contexts. As the re-

sults indicate, both the design and the implementation of ICT policies in education are very heterogeneous across Latin American countries. In general terms, though, countries perform better at the level of policy design (average score of 0.58)[9] than at policy implementation (average score of 0.42).[10] However, it is important to mention that the availability of data that confirm these indexes is not in all countries evaluated exhaustively; therefore, these results should be interpreted with caution.

A few countries in the region enjoy both a high index of policy definition and implementation, namely, Mexico, Panama, Uruguay and Cuba. On the contrary, countries such as Bolivia, Colombia, Paraguay and Ecuador tend to have both a lower ICT policy definition and implementation index. Finally, countries such as Argentina, Chile, Costa Rica, El Salvador, Nicaragua, Peru and the Dominican Republic possess higher scores in policy definition than in policy implementation. Interestingly, no country observes a high degree of policy implementation and a low degree of policy definition, which indicates that the first task of providing policy definitions and setting up clear goals has been achieved by most countries in the region; however, the effective implementation of their policies remains a pending task, especially in the most vulnerable sectors of society.

Finally, even though this study represents an important first step in developing quality indicators to measure the level of ICT policy definition and education across the region, no studies exist up to date regarding the actual impact of ICT policies in education in the region. Such knowledge is essential in order for countries to be able to monitor the usefulness and effectiveness of their existing policies and practical initiatives and to continue improving them.

4.2.1 Inconsistencies between Policy Definition and Implementation in the School Curriculum

Even through Hinostroza and Labbé's study (2011) shows an interesting macro-perspective of ICT policy definition and implementation in Latin America, other local studies have focused on a deeper analysis of policy implementation in the school curricula of specific countries. An example is De Fontcuberta's analysis of the ICT policy in education in Chile (see for example De Fontcuberta and Guerrero, 2007; De Fontcuberta 2008; De Fontcuberta 2009). De Fontcuberta (2009) found that even though the Chilean Ministry of Education had set up formal objectives for media education in the curriculum as a part of the plans and programmes of the Spanish Language and Communication sector, the reality of Chilean media education was far from what was stipulated in such objectives (De Fontcuberta and

9 In this study, the score index was measured on a scale from 0–1.
10 In this study, the score index was measured on a scale from 0–1.

Guerrero 2007; De Fontcuberta 2008; De Fontcuberta 2009). A look at these objectives gives the impression of a rather broad approach to media education aspired by the Ministry of Education: On the one hand, media are seen as educational tools, either as didactic resources for *learning through* media or as instruments that aid young people in *learning with media*. On the other hand, media are also conceived as objects of study, which means that young people are *learning about media* and the media system. The objectives of the Chilean Ministry of Education also consider creative aspects of media use. In this context, media are treated as *tools for communication and expression* and young people are encouraged to produce media content.

But in reality, the Chilean curriculum focuses greatly on the view of media as didactic resources for teaching other formal school content (De Fontcuberta and Guerrero, 2007)., i.e. media are viewed as mere tools to learn about other formal school contents, and rarely as objects of study in themselves. This incongruence reveals not only the lack of a clear policy agenda regarding media education, but also the need to improve the current curriculum based on a consistent vision and clear expectations regarding media education in Chile (De Fontcuberta, 2009).

De Fontcuberta (2009) also points out other important deficiencies of media education in Chile, which may also extend to other Latin American countries: It is striking that media education is incorporated into the curriculum only for the last four years of secondary school. Thus, especially younger children do not receive support in developing media literacy. Further, in Chile as in many other Latin American countries media education mostly refers to the written press and to television; other media, like radio or the Internet, are largely disregarded. Moreover, media are not treated in depth, but rather superficially from a more instrumental perspective. Finally, the marked lack of practical guidelines for teachers together with the inexistent initial teachers' training in media education makes the curricular objectives very difficult to achieve (De Fontcuberta, 2009).

In a way, De Fontcuberta's *studies* complements Hinostroza and Labbé's findings in that the latter have come to the conclusion that Chile is doing quite well at the level of policy definition, yet is lagging behind in terms of policy implementation, which is a common characteristic of most of the countries in the region and which therefore requires more attention and resources, especially from local Ministries of Education.

4.2.2 Unequal Digital Competencies as New Sources of Exclusion

In Latin America as everywhere else in the world, the acquisition of digital competency thresholds has become a prerequisite for social inclusion. Not surprisingly, ICT policies in education have become crucial for a number of reasons. For instance, the qualifications required by labour markets have changed and now highly demand digital skills which school systems cannot

deny. Human capital has, therefore, been re-defined based on the new (digital) skills needed to be competitive in the information society (United Nations, 2011). Therefore, the use of ICT in schools is not only necessary to ensure digital literacy among the population, but also to facilitate the attainment of the core assets that people nowadays need in order to fully participate in today's society and to take advantage of new opportunities in the economy, the state and the community (see for example, Katzman, 2010; United Nations, 2011). However, just as ICT have the potential to create opportunities for equity and social integration, they can also contribute to widening existing gaps or creating new ones, as is the case in the societies of Latin America.

The digital divide in Latin America can be explained by several factors, including the unequal access and use of ICT as a result of both the enormous differences in the availability of infrastructure (at school and at home) and the ways in which pupils (can) make use of and benefit from such an infrastructure. As regards access divides in the region, the market-driven penetration of ICT has generated important gaps in access to infrastructure by social class, especially at home. In fact, statistics indicate that while approximately 55% of the households in the highest income quintile have a computer connected to the Internet, only 26% of the households in the first quintile do. This, however, seems to affect older generations more than children and young people. Indeed, in households with 13–19 year-olds, connectivity is higher than in households where all family members are over 20 (United Nations, 2011). Nevertheless, a closer analysis of Internet access rates within generations reveals that access gaps reinforce class-based gaps (Katzman, 2010). In other words, the class gaps (especially in terms of home access) for younger generation users are actually widening, especially in those countries where technology is more market-driven, as is the case in Brazil, Chile and Uruguay. In Uruguay, for example, the connectivity gap between households with younger members in the highest and lowest quintiles is more than 80 percentage points as compared to households without young people, where the gap is less than 40 percentage points (United Nations, 2011). Similarly, in Chile, one of the countries with the highest levels of Internet penetration in Latin America (Peña, 2008; Internet World Stats, 2011) access is not evenly distributed among the population. Existing data confirm enormous inequalities not only between the rich and the poor (Godoy and Herrera, 2004) but also between younger and older generations (Peña, 2008).

If access outside the home (including cybercafés, schools, friends' or relatives' homes, etc. and not necessarily one's own home) is taken into consideration, a less negative picture is observed. For instance, Internet access in Chile is practically universal among children and young people with 96% of children being online (Estudio Índice Generación Digital, 2008). However, the frequency with which the highest and the lowest socio-economic groups

can access the Internet remains huge. Furthermore, among adults, only medium and high socio-economic groups get to use the Internet frequently. Not surprisingly, these are also the groups that can afford Internet connections at home. This is not unimportant, because the lack or reduced access to the Internet negatively affects the possibilities of taking advantage of the medium and consequently the development of high-order digital skills (Donoso, 2007; Kuhlemeier and Hemke, 2007; Livingstone et al., 2011).

As Sulke and Trucco (2010) observe, inequality in the region is also manifested in students' different levels of ability to use and to take advantage of ICT for developing the competencies and skills that are increasingly necessary for their active participation in the globalized world. These different levels of digital skills may be explained by the difference in intensity with which individuals can make use of technology (United Nations, 2011). On their turn, differences in intensity are closely related to more or less access, especially at home. Notably, recent international European research on children and young people has demonstrated that Internet access at home is highly connected to socio-economic status (Livingstone et al., 2011). This finding helps to support our theory that in Latin America, digital inequality functions as a vicious circle where socio-economic differences are reproduced and perpetuated in the population's digital skills. Nevertheless, one powerful mechanism to break this vicious circle is improving the quality and access to media education and in particular to high-quality ICT-based education so that all groups of society, especially the most vulnerable ones, are given the opportunity, the motivation and the skills to develop the competencies and the confidence to participate in the information society (Morduchowicz, 2009). On the contrary, if unequal access to (high quality) educational opportunities (including media and digital literacy) is maintained in the region, in other words, if education continues to be segmented by socio-economic conditions and educational levels in the household of origin, the gaps in access to decent jobs and well-being will continue to be reproduced (United Nations, 2011).

5. Conclusion

In the introduction of this paper we stressed the importance of considering (among other factors) social, political and historical developments for understanding different approaches to and challenges of media education in specific countries and regions. From a historical perspective, it is striking that media education in Latin America has always played an important role in the region's emancipation from both external (e.g. the domination of alien cultures, such as the US), as well as from internal threats (e.g. dictatorships). Indeed, attempts to achieve the citizens' emancipation through media education abound especially at specific socio-political junctures, such as the 70s

or the 80s marked by tremendous socio-political unrest and great social inequalities. Probably even more strongly than today, media education was then seen as an effective means to support emancipation, as is made manifest in (media) education approaches such as Freire's conscientization theory or the Liberation Theology.

Undoubtedly, the distinctive Latin American historical background, but also the region's cultural, socio-economic and political uniqueness have shaped media education and digital literacy in ways that differ considerably from other existing approaches worldwide, for instance, European ones. Not only are the approaches to media education and literacy different, but also the challenges the region faces to successfully implement them. As opposed to most European countries, the arguably biggest challenge Latin America faces nowadays is narrowing down the enormous socio-economic divide between different sectors of society. In today's world, where ICTs have become an important factor, especially with regard to political power, participation and international economic markets, inequalities become even more visible in Latin America's unequal access to formal education which, directly and indirectly, negatively impacts access to and appropriation of media and information technologies, but also opportunities for the individual's future development and well-being. Nevertheless, some efforts to counteract these inequalities begin to be visible both at a macro-level, for instance through local and regional political agendas, as well as at the micro-level in country-specific (media and ICT) education policies and initiatives.

As a matter of fact, in order to successfully face the challenges of globalization and the knowledge society, many countries in the region are investing important amounts of resources in the acquisition of ICT infrastructure and the development of policies that encourage their effective use in the classroom. However, most schools in the region are still not very well equipped. Additionally, human capital remains an issue, because many teachers lack the necessary digital skills to deal with the challenges of the information society, let alone to prepare their own pupils to deal with them. Difficulties such as these are rooted in diverse shortcomings, including a lack of infrastructure, deficient initial teacher-training and the inefficient implementation of media and ICT policies in education, all of which hinder the adequate development of ICT skills and media literacy, especially among the most deprived socio-economic groups.

In any case, as our paper shows, local governments are aware of the importance of media education and the need for digital literacy, especially for the less empowered sectors of society who need to be given the opportunity, the motivation and the skills to develop the competence and the confidence to participate in the so-called information society. However, the results of existing government initiatives are still to be assessed because "it is not enough to guarantee access to technology without promoting public policies

for the social appropriation of ICTs" (Peña 2008, pp. 100–101). In addition, the fact that many citizens still do not consider themselves as beneficiaries of new technologies (see for instance Peña 2008) stresses the need of media education as a life-long learning process. An important challenge for media education in Latin America is thus narrowing down the digital divide so that not only children and youth, but also other less 'favoured' segments of society can be supported in the development of the skills necessary to become integral members of the information society. Needless to say, in a context where mass media and information access is so unevenly distributed, media education should act as a powerful mechanism to achieve equitable access and appropriation of the nowadays indispensable communication and information technologies which can help guarantee the different members of society more equal opportunities to. (In this sense, one necessary step towards a more equitable information society is to insert media education as public state policy in order to assure that current initiatives and efforts in schools become a state-wide commitment rather than individual (and temporal) government efforts (Morduchowicz (2004).

To conclude, our paper shows that Latin American countries are committed to improving access to ICTs, as well as to supporting media literacy education because this is seen as a possibility of empowering citizens, especially those from the lowest socio-economic segments of society and thus as a chance of reducing the digital divide. Some countries – especially the richer ones of the region – are doing rather well, especially at the level of policy definition; however effective policy implementation remains a major problem.

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